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NEWS 15 FEB 28 REGISTRY/ZREGISTRY enhanced with more experimental spectral  
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NEWS 17 MAR 03 Updates in PATDPA; addition of IPC 8 data without attributes  
NEWS 18 MAR 08 X.25 communication option no longer available after June 2006  
NEWS 19 MAR 22 EMBASE is now updated on a daily basis  
NEWS 20 APR 03 New IPC 8 fields and IPC thesaurus added to PATDPAFULL  
NEWS 21 APR 03 Bibliographic data updates resume; new IPC 8 fields and IPC  
thesaurus added in PCTFULL  
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NEWS 23 APR 12 LINSPEC, learning database for INSPEC, reloaded and enhanced  
NEWS 24 APR 12 Improved structure highlighting in FQHIT and QHIT display  
in MARPAT  
NEWS 25 APR 12 Derwent World Patents Index to be reloaded and enhanced during  
second quarter; strategies may be affected  
  
NEWS EXPRESS FEBRUARY 15 CURRENT VERSION FOR WINDOWS IS V8.01a,  
CURRENT MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP),  
AND CURRENT DISCOVER FILE IS DATED 19 DECEMBER 2005.  
V8.0 AND V8.01 USERS CAN OBTAIN THE UPGRADE TO V8.01a AT  
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=> file medline, uspatful, dgene, embase, wpids, biosis, biotechds, fsta  
COST IN U.S. DOLLARS SINCE FILE TOTAL  
ENTRY SESSION  
FULL ESTIMATED COST 0.21 0.21

FILE 'MEDLINE' ENTERED AT 16:53:50 ON 26 APR 2006

FILE 'USPATFULL' ENTERED AT 16:53:50 ON 26 APR 2006  
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.=> s (retro-inverted peptide)  
L1 28 (RETRO-INVERTED PEPTIDE)

=> s (ZElan 144 or ZElan 145 or ZELan 146)  
L2 1 (ZELAN 144 OR ZELAN 145 OR ZELAN 146)

=> d 12 ti abs ibib tot

L2 ANSWER 1 OF 1 WPIDS COPYRIGHT 2006 THE THOMSON CORP on STN  
TI Retro-inverted peptide used to deliver active agents across the  
gastrointestinal tract to treat hypertension, diabetes, osteoporosis,  
hemophilia, anemia, cancer, migraines and angina pectoris.

AN 2000-400037 [34] WPIDS  
AB WO 200031123 A UPAB: 20000718

NOVELTY - A retro-inverted peptide (I) or a derivative of it, which specifically binds to the gastro-intestinal tract receptor HPT1, hPEPT1, D2H or hSI, is new.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:

(1) a retro-inverted peptide (II) which enhances delivery of an active agent across the gastro-intestinal tract into the systemic, portal or hepatic circulation;

(2) a composition, comprising (I) or (II), bound to a material comprising an active agent used to treat a mammalian disease or disorder;

(3) a composition, comprising a chimeric protein bound to a material comprising an active agent used to treat a mammalian disease or disorder,

the protein comprises **ZE**lan 144, **ZE**lan 145 or **ZE**lan 146, or a binding portion of them fused via a covalent bond to a second protein;

(4) a composition, comprising (I) or (II) bound to a drug containing particle;

(5) a pharmaceutical composition, comprising the composition of (2) in a carrier for use in vivo in humans;

(6) an antibody, or a fragment of it, capable of immunospecifically binding (I) or (II);

(7) a composition comprising (I) or (II) coated onto, absorbed onto or covalently bonded to, the surface of a nano- or microparticle; and

(8) a nano- or microparticle formed from (I) or (II).

**ACTIVITY** - Hypotensive; antidiabetic; osteopathic; hemostatic; antianemic; cytostatic; antimigraine; antianginal.

**MECHANISM OF ACTION** - The retro-inversion peptides target gastrointestinal tract transport receptors to promote in vivo uptake of active agents and/or enhance active agent delivery across the tract into the systemic circulation.

**USE** - The gastrointestinal agents are used to facilitate transport of active ingredients through human or animal gastrointestinal tissue, from the lumen to the portal, hepatic, or systemic circulation (claimed). The compositions containing these agents can be used to treat or prevent mammalian, especially human, diseases or disorders, especially hypertension, diabetes, osteoporosis, hemophilia, anemia, cancer, migraine, and angina pectoris (claimed). The compositions can be administered in vivo to image selected sites or tissues, such as the gastrointestinal tract, by using an imaging agent as the active agent. The antibodies can be used for imaging peptides after in vivo administration, to monitor treatment efficacy, to measure peptide levels in physiological samples, and in diagnostic methods.

**ADVANTAGE** - None given.

Dwg.0/2

ACCESSION NUMBER: 2000-400037 [34] WPIDS  
DOC. NO. CPI: C2000-120829  
TITLE: Retro-inverted peptide used to deliver active agents across the gastrointestinal tract to treat hypertension, diabetes, osteoporosis, hemophilia, anemia, cancer, migraines and angina pectoris.  
DERWENT CLASS: B04  
INVENTOR(S): O'MAHONY, D J; OMAHONY, D J  
PATENT ASSIGNEE(S): (ELAN-N) ELAN CORP PLC  
COUNTRY COUNT: 91  
PATENT INFORMATION:

PATENT NO	KIND DATE	WEEK	LA	PG
WO 2000031123	A2 20000602 (200034)*	EN 36		
RW:	AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW NL OA PT SD SE SL SZ TZ UG ZW			
W:	AE AL AM AT AU AZ BA BB BG BR BY CA CH CN CR CU CZ DE DK DM EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW			
AU 2000011744	A 20000613 (200043)			
EP 1131344	A2 20010912 (200155)	EN		
R:	AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI			
JP 2002530429	W 20020917 (200276)	39		
EP 1131344	B1 20050803 (200551)	EN		
R:	AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE			
DE 69926531	E 20050908 (200561)			
DE 69926531	T2 20060330 (200623)			

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 2000031123	A2	WO 1999-IE117	19991119
AU 2000011744	A	AU 2000-11744	19991119
EP 1131344	A2	EP 1999-972640	19991119
		WO 1999-IE117	19991119
JP 2002530429	W	WO 1999-IE117	19991119
		JP 2000-583950	19991119
EP 1131344	B1	EP 1999-972640	19991119
		WO 1999-IE117	19991119
DE 69926531	E	DE 1999-626531	19991119
		EP 1999-972640	19991119
		WO 1999-IE117	19991119
DE 69926531	T2	DE 1999-626531	19991119
		EP 1999-972640	19991119
		WO 1999-IE117	19991119

FILING DETAILS:

PATENT NO	KIND	PATENT NO
AU 2000011744	A Based on	WO 2000031123
EP 1131344	A2 Based on	WO 2000031123
JP 2002530429	W Based on	WO 2000031123
EP 1131344	B1 Based on	WO 2000031123
DE 69926531	E Based on	EP 1131344
	Based on	WO 2000031123
DE 69926531	T2 Based on	EP 1131344
	Based on	WO 2000031123

PRIORITY APPLN. INFO: US 1998-109038P 19981119

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FILE 'MEDLINE, USPATFULL, DGENE, EMBASE, WPIDS, BIOSIS, BIOTECHDS, FSTA'  
ENTERED AT 16:53:50 ON 26 APR 2006

L1 28 S (RETRO-INVERTED PEPTIDE)  
L2 1 S (ZELAN 144 OR ZELAN 145 OR ZELAN 146)

=> s l1 and (HPT1 or hPEPT1 or hSI or D2H)  
L3 9 L1 AND (HPT1 OR HPEPT1 OR HSI OR D2H)

=> s l3 ti abs ibib tot  
MISSING OPERATOR L3 TI  
The search profile that was entered contains terms or  
nested terms that are not separated by a logical operator.

=> d l3 ti abs ibib tot

L3 ANSWER 1 OF 9 DGENE COPYRIGHT 2006 The Thomson Corp on STN  
TI Retro-inverted peptide used to deliver  
active agents across the gastrointestinal tract to treat hypertension,  
diabetes, osteoporosis, haemophilia, anaemia, cancer, migraines and  
angina pectoris -  
AN AAB03872 peptide DGENE  
AB This invention relates to retro-inverted peptides which specifically bind  
to the gastro-intestinal tract receptor **HPT1**, **hPEPT1**,  
**D2H** or **hSI**. Also included in the invention are a

**retro-inverted peptide** which enhances the delivery of an active agent across the gastrointestinal tract (GIT) into the systemic, portal or hepatic circulation. A composition comprising a **retro-inverted peptide** bound to a material comprising an active agent used to treat a mammalian disease or disorder is also disclosed in the invention. The retro-inversion peptides target gastrointestinal tract transport receptors to promote in vivo uptake of active agents and/or enhance active agent delivery across the tract into the systemic circulation. The gastrointestinal agents (containing retro-inverted peptides) are used to facilitate the transport of active ingredients through human or animal gastrointestinal tissue, from the lumen to the portal, hepatic, or systemic circulation. The compositions containing these agents can be used to treat or prevent mammalian, especially human, diseases or disorders, especially hypertension, diabetes, osteoporosis, haemophilia, anaemia, cancer, migraine, and angina pectoris. The compositions can be administered in vivo to image selected sites or tissues, such as the gastrointestinal tract, by using an imaging agent as the active agent. The present sequence represents a peptide from which a retro-inversion peptide of the invention is created. The peptide is the full length HAX42 amino acid sequence.

ACCESSION NUMBER: AAB03872 peptide DGENE

TITLE: **Retro-inverted peptide** used to deliver active agents across the gastrointestinal tract to treat hypertension, diabetes, osteoporosis, haemophilia, anaemia, cancer, migraines and angina pectoris -

INVENTOR: O'Mahony D J

PATENT ASSIGNEE: (ELAN-N) ELAN CORP PLC.

PATENT INFO: WO 2000031123 A2 20000602

36

APPLICATION INFO: WO 1999-IE117 19991119

PRIORITY INFO: US 1998-109038 19981119

DOCUMENT TYPE: Patent

LANGUAGE: English

OTHER SOURCE: 2000-400037 [34]

DESCRIPTION: GIT receptor targeting peptide ZElan021 (full length HAX42).

L3 ANSWER 2 OF 9 DGENE COPYRIGHT 2006 The Thomson Corp on STN

TI **Retro-inverted peptide** used to deliver active agents across the gastrointestinal tract to treat hypertension, diabetes, osteoporosis, haemophilia, anaemia, cancer, migraines and angina pectoris -

AN AAB03871 peptide DGENE

AB This invention relates to retro-inverted peptides which specifically bind to the gastro-intestinal tract receptor **HPT1**, **hPEPT1**, **D2H** or **hSI**. Also included in the invention are a **retro-inverted peptide** which enhances the delivery of an active agent across the gastrointestinal tract (GIT) into the systemic, portal or hepatic circulation. A composition comprising a **retro-inverted peptide** bound to a material comprising an active agent used to treat a mammalian disease or disorder is also disclosed in the invention. The retro-inversion peptides target gastrointestinal tract transport receptors to promote in vivo uptake of active agents and/or enhance active agent delivery across the tract into the systemic circulation. The gastrointestinal agents (containing retro-inverted peptides) are used to facilitate the transport of active ingredients through human or animal gastrointestinal tissue, from the lumen to the portal, hepatic, or systemic circulation. The compositions containing these agents can be used to treat or prevent mammalian, especially human, diseases or disorders, especially hypertension, diabetes, osteoporosis, haemophilia, anaemia, cancer, migraine, and angina pectoris. The compositions can be administered in vivo to image selected sites or tissues, such as the gastrointestinal tract, by using an imaging agent as the active agent. The present sequence represents a peptide from which a retro-inversion peptide of the invention is created.

The peptide is the full length PAX2 amino acid sequence.  
ACCESSION NUMBER: AAB03871 peptide DGENE  
TITLE: **Retro-inverted peptide** used to deliver active agents across the gastrointestinal tract to treat hypertension, diabetes, osteoporosis, haemophilia, anaemia, cancer, migraines and angina pectoris -  
INVENTOR: O'Mahony D J  
PATENT ASSIGNEE: (ELAN-N) ELAN CORP PLC.  
PATENT INFO: WO 2000031123 A2 20000602 36  
APPLICATION INFO: WO 1999-IE117 19991119  
PRIORITY INFO: US 1998-109038 19981119  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
OTHER SOURCE: 2000-400037 [34]  
DESCRIPTION: GIT receptor targeting peptide ZElan018 (full length PAX2).

*Applicant*

L3 ANSWER 3 OF 9 DGENE COPYRIGHT 2006 The Thomson Corp on STN  
TI **Retro-inverted peptide** used to deliver active agents across the gastrointestinal tract to treat hypertension, diabetes, osteoporosis, haemophilia, anaemia, cancer, migraines and angina pectoris -  
AN AAB03870 peptide DGENE  
AB This invention relates to retro-inverted peptides which specifically bind to the gastro-intestinal tract receptor **HPT1**, **hPEPT1**, **D2H** or **hSI**. Also included in the invention are a **retro-inverted peptide** which enhances the delivery of an active agent across the gastrointestinal tract (GIT) into the systemic, portal or hepatic circulation. A composition comprising a **retro-inverted peptide** bound to a material comprising an active agent used to treat a mammalian disease or disorder is also disclosed in the invention. The retro-inversion peptides target gastrointestinal tract transport receptors to promote *in vivo* uptake of active agents and/or enhance active agent delivery across the tract into the systemic circulation. The gastrointestinal agents (containing retro-inverted peptides) are used to facilitate the transport of active ingredients through human or animal gastrointestinal tissue, from the lumen to the portal, hepatic, or systemic circulation. The compositions containing these agents can be used to treat or prevent mammalian, especially human, diseases or disorders, especially hypertension, diabetes, osteoporosis, haemophilia, anaemia, cancer, migraine, and angina pectoris. The compositions can be administered *in vivo* to image selected sites or tissues, such as the gastrointestinal tract, by using an imaging agent as the active agent. The present sequence represents a peptide from which a retro-inversion peptide of the invention is created. The peptide is a fragment of HAX42.

ACCESSION NUMBER: AAB03870 peptide DGENE  
TITLE: **Retro-inverted peptide** used to deliver active agents across the gastrointestinal tract to treat hypertension, diabetes, osteoporosis, haemophilia, anaemia, cancer, migraines and angina pectoris -  
INVENTOR: O'Mahony D J  
PATENT ASSIGNEE: (ELAN-N) ELAN CORP PLC.  
PATENT INFO: WO 2000031123 A2 20000602 36  
APPLICATION INFO: WO 1999-IE117 19991119  
PRIORITY INFO: US 1998-109038 19981119  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
OTHER SOURCE: 2000-400037 [34]  
DESCRIPTION: GIT receptor targeting peptide ZElan091 (HAX42 fragment).

*Applicant*

L3 ANSWER 4 OF 9 DGENE COPYRIGHT 2006 The Thomson Corp on STN  
TI **Retro-inverted peptide** used to deliver active agents across the gastrointestinal tract to treat hypertension,

diabetes, osteoporosis, haemophilia, anaemia, cancer, migraines and angina pectoris -

AN AAB03869 peptide DGENE

AB This invention relates to retro-inverted peptides which specifically bind to the gastro-intestinal tract receptor **HPT1**, **hPEPT1**, **D2H** or **hSI**. Also included in the invention are a **retro-inverted peptide** which enhances the delivery of an active agent across the gastrointestinal tract (GIT) into the systemic, portal or hepatic circulation. A composition comprising a **retro-inverted peptide** bound to a material comprising an active agent used to treat a mammalian disease or disorder is also disclosed in the invention. The retro-inversion peptides target gastrointestinal tract transport receptors to promote in vivo uptake of active agents and/or enhance active agent delivery across the tract into the systemic circulation. The gastrointestinal agents (containing retro-inverted peptides) are used to facilitate the transport of active ingredients through human or animal gastrointestinal tissue, from the lumen to the portal, hepatic, or systemic circulation. The compositions containing these agents can be used to treat or prevent mammalian, especially human, diseases or disorders, especially hypertension, diabetes, osteoporosis, haemophilia, anaemia, cancer, migraine, and angina pectoris. The compositions can be administered in vivo to image selected sites or tissues, such as the gastrointestinal tract, by using an imaging agent as the active agent. The present sequence represents a peptide from which a retro-inversion peptide of the invention is created. The peptide is a fragment of P31.

ACCESSION NUMBER: AAB03869 peptide DGENE

TITLE: **Retro-inverted peptide** used to deliver active agents across the gastrointestinal tract to treat hypertension, diabetes, osteoporosis, haemophilia, anaemia, cancer, migraines and angina pectoris -

INVENTOR: O'Mahony D J

PATENT ASSIGNEE: (ELAN-N) ELAN CORP PLC.

PATENT INFO: WO 2000031123 A2 20000602

36

APPLICATION INFO: WO 1999-IE117 19991119

PRIORITY INFO: US 1998-109038 19981119

DOCUMENT TYPE: Patent

LANGUAGE: English

OTHER SOURCE: 2000-400037 [34]

DESCRIPTION: GIT receptor targeting peptide ZElan031 (P31 fragment).

L3 ANSWER 5 OF 9 DGENE COPYRIGHT 2006 The Thomson Corp on STN

TI **Retro-inverted peptide** used to deliver active agents across the gastrointestinal tract to treat hypertension, diabetes, osteoporosis, haemophilia, anaemia, cancer, migraines and angina pectoris -

AN AAB03868 peptide DGENE

AB This invention relates to retro-inverted peptides which specifically bind to the gastro-intestinal tract receptor **HPT1**, **hPEPT1**, **D2H** or **hSI**. Also included in the invention are a **retro-inverted peptide** which enhances the delivery of an active agent across the gastrointestinal tract (GIT) into the systemic, portal or hepatic circulation. A composition comprising a **retro-inverted peptide** bound to a material comprising an active agent used to treat a mammalian disease or disorder is also disclosed in the invention. The retro-inversion peptides target gastrointestinal tract transport receptors to promote in vivo uptake of active agents and/or enhance active agent delivery across the tract into the systemic circulation. The gastrointestinal agents (containing retro-inverted peptides) are used to facilitate the transport of active ingredients through human or animal gastrointestinal tissue, from the lumen to the portal, hepatic, or systemic circulation. The compositions containing these agents can be used to treat or prevent mammalian,

especially human, diseases or disorders, especially hypertension, diabetes, osteoporosis, haemophilia, anaemia, cancer, migraine, and angina pectoris. The compositions can be administered in vivo to image selected sites or tissues, such as the gastrointestinal tract, by using an imaging agent as the active agent. The present sequence represents a peptide from which a retro-inversion peptide of the invention is created. The peptide is a fragment of PAX2.

ACCESSION NUMBER: AAB03868 peptide DGENE

TITLE: **Retro-inverted peptide** used to deliver active agents across the gastrointestinal tract to treat hypertension, diabetes, osteoporosis, haemophilia, anaemia, cancer, migraines and angina pectoris -

INVENTOR: O'Mahony D J

PATENT ASSIGNEE: (ELAN-N) ELAN CORP PLC.

PATENT INFO: WO 2000031123 A2 20000602 36

APPLICATION INFO: WO 1999-IE117 19991119

PRIORITY INFO: US 1998-109038 19981119

DOCUMENT TYPE: Patent

LANGUAGE: English

OTHER SOURCE: 2000-400037 [34]

DESCRIPTION: GIT receptor targeting peptide ZElan129 (PAX2 fragment).

L3 ANSWER 6 OF 9 DGENE COPYRIGHT 2006 The Thomson Corp on STN

TI **Retro-inverted peptide** used to deliver active agents across the gastrointestinal tract to treat hypertension, diabetes, osteoporosis, haemophilia, anaemia, cancer, migraines and angina pectoris -

AN AAB03867 peptide DGENE

AB This invention relates to retro-inverted peptides which specifically bind to the gastro-intestinal tract receptor **HPT1**, **hPEPT1**, **D2H** or **hSI**. Also included in the invention are a **retro-inverted peptide** which enhances the delivery of an active agent across the gastrointestinal tract (GIT) into the systemic, portal or hepatic circulation. A composition comprising a **retro-inverted peptide** bound to a material comprising an active agent used to treat a mammalian disease or disorder is also disclosed in the invention. The retro-inversion peptides target gastrointestinal tract transport receptors to promote in vivo uptake of active agents and/or enhance active agent delivery across the tract into the systemic circulation. The gastrointestinal agents (containing retro-inverted peptides) are used to facilitate the transport of active ingredients through human or animal gastrointestinal tissue, from the lumen to the portal, hepatic, or systemic circulation. The compositions containing these agents can be used to treat or prevent mammalian, especially human, diseases or disorders, especially hypertension, diabetes, osteoporosis, haemophilia, anaemia, cancer, migraine, and angina pectoris. The compositions can be administered in vivo to image selected sites or tissues, such as the gastrointestinal tract, by using an imaging agent as the active agent. The present sequence represents a retro-inversion used in the invention. The sequence is a HAX42 14 mer fragment D form retro-inversion peptide.

ACCESSION NUMBER: AAB03867 peptide DGENE

TITLE: **Retro-inverted peptide** used to deliver active agents across the gastrointestinal tract to treat hypertension, diabetes, osteoporosis, haemophilia, anaemia, cancer, migraines and angina pectoris -

INVENTOR: O'Mahony D J

PATENT ASSIGNEE: (ELAN-N) ELAN CORP PLC.

PATENT INFO: WO 2000031123 A2 20000602 36

APPLICATION INFO: WO 1999-IE117 19991119

PRIORITY INFO: US 1998-109038 19981119

DOCUMENT TYPE: Patent

LANGUAGE: English

OTHER SOURCE: 2000-400037 [34]  
DESCRIPTION: GIT receptor targeting peptide ZElan146 (HAX42 fragment).

L3 ANSWER 7 OF 9 DGENE COPYRIGHT 2006 The Thomson Corp on STN  
TI **Retro-inverted peptide** used to deliver  
active agents across the gastrointestinal tract to treat hypertension,  
diabetes, osteoporosis, haemophilia, anaemia, cancer, migraines and  
angina pectoris -  
AN AAB03866 peptide DGENE  
AB This invention relates to retro-inverted peptides which specifically bind  
to the gastro-intestinal tract receptor **HPT1**, **hPEPT1**,  
**D2H** or **hSI**. Also included in the invention are a  
**retro-inverted peptide** which enhances the  
delivery of an active agent across the gastrointestinal tract (GIT) into  
the systemic, portal or hepatic circulation. A composition comprising a  
**retro-inverted peptide** bound to a material  
comprising an active agent used to treat a mammalian disease or disorder  
is also disclosed in the invention. The retro-inversion peptides target  
gastrointestinal tract transport receptors to promote in vivo uptake of  
active agents and/or enhance active agent delivery across the tract into  
the systemic circulation. The gastrointestinal agents (containing  
retro-inverted peptides) are used to facilitate the transport of active  
ingredients through human or animal gastrointestinal tissue, from the  
lumen to the portal, hepatic, or systemic circulation. The compositions  
containing these agents can be used to treat or prevent mammalian,  
especially human, diseases or disorders, especially hypertension,  
diabetes, osteoporosis, haemophilia, anaemia, cancer, migraine, and  
angina pectoris. The compositions can be administered in vivo to image  
selected sites or tissues, such as the gastrointestinal tract, by using  
an imaging agent as the active agent. The present sequence represents a  
retro-inversion used in the invention. The sequence is a P31 16 mer  
fragment D form retro-inversion peptide.

ACCESSION NUMBER: AAB03866 peptide DGENE

TITLE: **Retro-inverted peptide** used to  
deliver active agents across the gastrointestinal tract to  
treat hypertension, diabetes, osteoporosis, haemophilia,  
anaemia, cancer, migraines and angina pectoris -

INVENTOR: O'Mahony D J

PATENT ASSIGNEE: (ELAN-N) ELAN CORP PLC.

36

PATENT INFO: WO 2000031123 A2 20000602

APPLICATION INFO: WO 1999-IE117 19991119

PRIORITY INFO: US 1998-109038 19981119

DOCUMENT TYPE: Patent

LANGUAGE: English

OTHER SOURCE: 2000-400037 [34]

DESCRIPTION: GIT receptor targeting peptide ZElan145 (P31 fragment).

L3 ANSWER 8 OF 9 DGENE COPYRIGHT 2006 The Thomson Corp on STN

TI **Retro-inverted peptide** used to deliver  
active agents across the gastrointestinal tract to treat hypertension,  
diabetes, osteoporosis, haemophilia, anaemia, cancer, migraines and  
angina pectoris -

AN AAB03865 peptide DGENE

AB This invention relates to retro-inverted peptides which specifically bind  
to the gastro-intestinal tract receptor **HPT1**, **hPEPT1**,  
**D2H** or **hSI**. Also included in the invention are a  
**retro-inverted peptide** which enhances the  
delivery of an active agent across the gastrointestinal tract (GIT) into  
the systemic, portal or hepatic circulation. A composition comprising a  
**retro-inverted peptide** bound to a material  
comprising an active agent used to treat a mammalian disease or disorder  
is also disclosed in the invention. The retro-inversion peptides target  
gastrointestinal tract transport receptors to promote in vivo uptake of

active agents and/or enhance active agent delivery across the tract into the systemic circulation. The gastrointestinal agents (containing retro-inverted peptides) are used to facilitate the transport of active ingredients through human or animal gastrointestinal tissue, from the lumen to the portal, hepatic, or systemic circulation. The compositions containing these agents can be used to treat or prevent mammalian, especially human, diseases or disorders, especially hypertension, diabetes, osteoporosis, haemophilia, anaemia, cancer, migraine, and angina pectoris. The compositions can be administered in vivo to image selected sites or tissues, such as the gastrointestinal tract, by using an imaging agent as the active agent. The present sequence represents a retro-inversion used in the invention. The sequence is a PAX2 15 mer fragment D form retro-inversion peptide.

ACCESSION NUMBER: AAB03865 peptide DGENE

TITLE: **Retro-inverted peptide** used to deliver active agents across the gastrointestinal tract to treat hypertension, diabetes, osteoporosis, haemophilia, anaemia, cancer, migraines and angina pectoris -

INVENTOR: O'Mahony D J

PATENT ASSIGNEE: (ELAN-N) ELAN CORP PLC.

PATENT INFO: WO 2000031123 A2 20000602 36

APPLICATION INFO: WO 1999-IE117 19991119

PRIORITY INFO: US 1998-109038 19981119

DOCUMENT TYPE: Patent

LANGUAGE: English

OTHER SOURCE: 2000-400037 [34]

DESCRIPTION: GIT receptor targeting peptide ZElan144 (PAX2 fragment).

L3 ANSWER 9 OF 9 WPIDS COPYRIGHT 2006 THE THOMSON CORP on STN

TI **Retro-inverted peptide** used to deliver active agents across the gastrointestinal tract to treat hypertension, diabetes, osteoporosis, hemophilia, anemia, cancer, migraines and angina pectoris.

AN 2000-400037 [34] WPIDS

AB WO 200031123 A UPAB: 20000718

NOVELTY - A **retro-inverted peptide** (I) or a derivative of it, which specifically binds to the gastro-intestinal tract receptor **HPT1**, **hPEPT1**, **D2H** or **hSI**, is new.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:

(1) a **retro-inverted peptide** (II) which enhances delivery of an active agent across the gastro-intestinal tract into the systemic, portal or hepatic circulation;

(2) a composition, comprising (I) or (II), bound to a material comprising an active agent used to treat a mammalian disease or disorder;

(3) a composition, comprising a chimeric protein bound to a material comprising an active agent used to treat a mammalian disease or disorder, the protein comprises ZElan 144, ZElan 145 or ZElan 146, or a binding portion of them fused via a covalent bond to a second protein;

(4) a composition, comprising (I) or (II) bound to a drug containing particle;

(5) a pharmaceutical composition, comprising the composition of (2) in a carrier for use in vivo in humans;

(6) an antibody, or a fragment of it, capable of immunospecifically binding (I) or (II);

(7) a composition comprising (I) or (II) coated onto, absorbed onto or covalently bonded to, the surface of a nano- or microparticle; and

(8) a nano- or microparticle formed from (I) or (II).

ACTIVITY - Hypotensive; antidiabetic; osteopathic; hemostatic; antianemic; cytostatic; antimigraine; antianginal.

MECHANISM OF ACTION - The retro-inversion peptides target gastrointestinal tract transport receptors to promote in vivo uptake of

active agents and/or enhance active agent delivery across the tract into the systemic circulation.

USE - The gastrointestinal agents are used to facilitate transport of active ingredients through human or animal gastrointestinal tissue, from the lumen to the portal, hepatic, or systemic circulation (claimed). The compositions containing these agents can be used to treat or prevent mammalian, especially human, diseases or disorders, especially hypertension, diabetes, osteoporosis, hemophilia, anemia, cancer, migraine, and angina pectoris (claimed). The compositions can be administered in vivo to image selected sites or tissues, such as the gastrointestinal tract, by using an imaging agent as the active agent. The antibodies can be used for imaging peptides after in vivo administration, to monitor treatment efficacy, to measure peptide levels in physiological samples, and in diagnostic methods.

ADVANTAGE - None given.

Dwg. 0/2

ACCESSION NUMBER: 2000-400037 [34] WPIDS  
DOC. NO. CPI: C2000-120829  
TITLE: **Retro-inverted peptide** used  
to deliver active agents across the gastrointestinal tract to treat hypertension, diabetes, osteoporosis, hemophilia, anemia, cancer, migraines and angina pectoris.  
DERWENT CLASS: B04  
INVENTOR(S): O'MAHONY, D J; OMAHONY, D J  
PATENT ASSIGNEE(S): (ELAN-N) ELAN CORP PLC  
COUNTRY COUNT: 91  
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
WO 2000031123	A2	20000602 (200034)*	EN	36	
RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW NL OA PT SD SE SL SZ TZ UG ZW					
W: AE AL AM AT AU AZ BA BB BG BR BY CA CH CN CR CU CZ DE DK DM EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW					
AU 2000011744	A	20000613 (200043)			
EP 1131344	A2	20010912 (200155)	EN		
R: AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI					
JP 2002530429	W	20020917 (200276)		39	
EP 1131344	B1	20050803 (200551)	EN		
R: AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE					
DE 69926531	E	20050908 (200561)			
DE 69926531	T2	20060330 (200623)			

#### APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 2000031123	A2	WO 1999-IE117	19991119
AU 2000011744	A	AU 2000-11744	19991119
EP 1131344	A2	EP 1999-972640	19991119
		WO 1999-IE117	19991119
JP 2002530429	W	WO 1999-IE117	19991119
		JP 2000-583950	19991119
EP 1131344	B1	EP 1999-972640	19991119
		WO 1999-IE117	19991119
DE 69926531	E	DE 1999-626531	19991119
		EP 1999-972640	19991119
		WO 1999-IE117	19991119

DE 69926531

T2

DE 1999-626531

19991119

EP 1999-972640

19991119

WO 1999-IE117

19991119

FILING DETAILS:

PATENT NO	KIND	PATENT NO
AU 2000011744	A Based on	WO 2000031123
EP 1131344	A2 Based on	WO 2000031123
JP 2002530429	W Based on	WO 2000031123
EP 1131344	B1 Based on	WO 2000031123
DE 69926531	E Based on	EP 1131344
	Based on	WO 2000031123
DE 69926531	T2 Based on	EP 1131344
	Based on	WO 2000031123

PRIORITY APPLN. INFO: US 1998-109038P 19981119

=> e O'Mahony, D/au

MISMATCHED QUOTE IN EXPAND TERM

Quotation marks (or apostrophes) must be used in pairs,  
one before and one after the expression you are setting  
off or masking.

# Refine Search

## Search Results -

Terms	Documents
L2 and (hPEPT1)	3

Database:

US Pre-Grant Publication Full-Text Database  
US Patents Full-Text Database  
US OCR Full-Text Database  
EPO Abstracts Database  
JPO Abstracts Database  
Derwent World Patents Index  
IBM Technical Disclosure Bulletins

Search:

L3

 **Refine Search**

**Recall Text** 

**Clear**

**Interrupt**

## Search History

DATE: Wednesday, April 26, 2006 [Printable Copy](#) [Create Case](#)

<u>Set Name</u>	<u>Query</u>	<u>Hit Count</u>	<u>Set Name</u>
side by side			result set

*DB=USPT; PLUR=YES; OP=OR*

<u>L3</u>	L2 and (hPEPT1)	3	<u>L3</u>
<u>L2</u>	L1 and (hSI)	138	<u>L2</u>
<u>L1</u>	Retro-inverted peptide	82606	<u>L1</u>

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## Search Results - Record(s) 1 through 3 of 3 returned.

### 1. Document ID: US 6780846 B1

L3: Entry 1 of 3

File: USPT

Aug 24, 2004

US-PAT-NO: 6780846

DOCUMENT-IDENTIFIER: US 6780846 B1

TITLE: Membrane translocating peptide drug delivery system

DATE-ISSUED: August 24, 2004

#### INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
O'Mahony; Daniel J.	Dublin			IE
Lambkin; Imelda J.	Dublin			IE

US-CL-CURRENT: 514/12

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Claims](#) | [RMC](#) | [Draw Desc](#) | [Im3D](#)

### 2. Document ID: US 6703362 B1

L3: Entry 2 of 3

File: USPT

Mar 9, 2004

US-PAT-NO: 6703362

DOCUMENT-IDENTIFIER: US 6703362 B1

TITLE: Random peptides that bind to gastro-intestinal tract (GIT) transport receptors and related methods

DATE-ISSUED: March 9, 2004

#### INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Alvarez; Vernon L.	Morrisville	PA		
O'Mahony; Daniel J.	Dublin			IE
Lambkin; Imelda J.	Dublin			IE
Patterson; Catherine A.	Dublin			IE
Singleton; Judith	Rocky Hill	NJ		
Belinka, Jr.; Benjamin A.	Kendall Park	NJ		
Carter; John M.	Trenton	NJ		
Cagney; Gerard M.	Seattle	WA		

US-CL-CURRENT: 514/12; 424/184.1, 424/185.1, 424/400, 435/69.1, 435/69.2, 436/86, 514/2, 514/21, 530/300, 530/324, 530/350

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Claims](#) | [RMC](#) | [Draw Desc](#) | [Im3D](#)

US-PAT-NO: 6699973

DOCUMENT-IDENTIFIER: US 6699973 B1

TITLE: Antibodies to peptides that target GIT receptors and related methods

DATE-ISSUED: March 2, 2004

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
O'Mahony; Daniel Joseph	Blackrock			IE
Seveso; Michela	Padua			IT

US-CL-CURRENT: 530/387.9; 424/133.1, 424/135.1, 424/139.1, 424/141.1, 424/145.1,  
424/152.1, 424/158.1, 530/388.1, 530/388.24, 530/389.2

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Claims](#) | [WOIC](#) | [Draw Desc](#) | [Im3](#)

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Terms	Documents
L2 and (hPEPT1)	3

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